

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of:

Naoki ITOKAWA, et al.

Serial No. 10/807,535

Group Art Unit: 2629

Confirmation No. 3781

Filed: March 24, 2004

Examiner: LEWIS, DAVID LEE

For: METHOD FOR DRIVING PLASMA DISPLAY PANEL

**PETITION UNDER 37 CFR 3.81(b)**

**AND SECOND REQUEST FOR CERTIFICATE OF CORRECTION**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants are filing a Petition and Second Request for Certification of Correction for inadvertent errors made in the subject application after paying the issue fee and after issuance of a patent. Applicants have found an inadvertent error on the Issue Fee Transmittal filed in the USPTO on February 17, 2009. As a result, the error appears on the face of the Letters Patent and, unfortunately, was overlooked until now (copy enclosed).

On February 17, 2009 when Applicants prepared and filed the Issue Fee Transmittal, the Transmittal inadvertently listed **HITACHI, LTD.** as the **sole** Assignee, omitting the **second** Assignee's name of **FUJITSU HITACHI PLASMA DISPLAY LIMITED** (copy enclosed).

As evidenced by the enclosed Notice of Recordation recorded on **June 21, 2004** at **Reel 015484/ Frame 0986**, **FUJITSU LIMITED AND FUJITSU HITACHI PLASMA DISPLAY LIMITED** has had **joint ownership** in the subject application since the initial filing date of **March 24, 2004**.

Since that time, and as evidenced by the enclosed Notice of Recordation recorded on December 23, 2005 at **Reel 017136/ Frame 0874**, FUJITSU LIMITED assigned its entire rights to **HITACHI, LTD.**; and as further evidenced by the enclosed Notice of Recordation recorded October 29, 2008, **Reel 021785/ Frame 0276**, HITACHI LTD. assigned its entire rights to

**HITACHI PLASMA PATENT LICENSING CO., LTD.**, which was filed before the subject Patent issued.

Accordingly, Applicants are respectfully requesting that the PETITION be entered and made of record, since Applicants have proven and provided proof that the errors were inadvertent.

It is further requested that this file be forwarded to the Certificates of Correction Branch for issuance of a CERTIFICATE OF CORRECTION to correct and replace the appropriate Assignee's names of record as follows: **"HITACHI PLASMA PATENT LICENSING CO., LTD." AND "FUJITSU HITACHI PLASMA DISPLAY LIMITED"**.

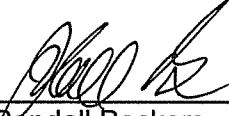
Applicants respectfully submit the processing fee of **\$130** as set forth under 37 CFR 1.117(h) and **\$100** to cover the cost of the Certificate is attached.

If there are any additional fees associated with filing of this Petition, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 11/25/9

By:   
J. Randall Beckers  
Registration No. 30,358

1201 New York Ave, N.W., 7th Floor  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501

COPY



US007570231B2

(12) **United States Patent**  
**Itokawa et al.**

(10) **Patent No.:** **US 7,570,231 B2**  
(45) **Date of Patent:** **Aug. 4, 2009**

(54) **METHOD FOR DRIVING PLASMA DISPLAY PANEL**

(75) Inventors: **Naoki Itokawa**, Kawasaki (JP); **Yoshiho Seo**, Kawasaki (JP); **Yasunobu Hashimoto**, Kawasaki (JP); **Tetsuya Sakamoto**, Kawasaki (JP); **Tomokatsu Kishi**, Kawasaki (JP)

(73) Assignee: **Hitachi, Ltd.**, Tokyo (JP)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 651 days.

(21) Appl. No.: **10/807,535**

(22) Filed: **Mar. 24, 2004**

(65) **Prior Publication Data**

US 2004/0201553 A1 Oct. 14, 2004

(30) **Foreign Application Priority Data**

Mar. 28, 2003 (JP) ..... 2003-092215  
Feb. 24, 2004 (JP) ..... 2004-048529

(51) **Int. Cl.**

**G09G 3/10** (2006.01)

**G09G 3/28** (2006.01)

(52) **U.S. Cl.** ..... **345/68; 345/60; 315/169.4**

(58) **Field of Classification Search** ... **315/169.1-169.4; 345/60-100, 204-214**

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

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2001/0005188 A1 6/2001 Watanabe  
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(Continued)

**FOREIGN PATENT DOCUMENTS**

EP 1 065 645 1/2001

(Continued)

**OTHER PUBLICATIONS**

European Search Report, dated Jul. 19, 2006, for related European Patent Application No. EP 04 25 1815.9-2205.

(Continued)

*Primary Examiner*—David L. Lewis

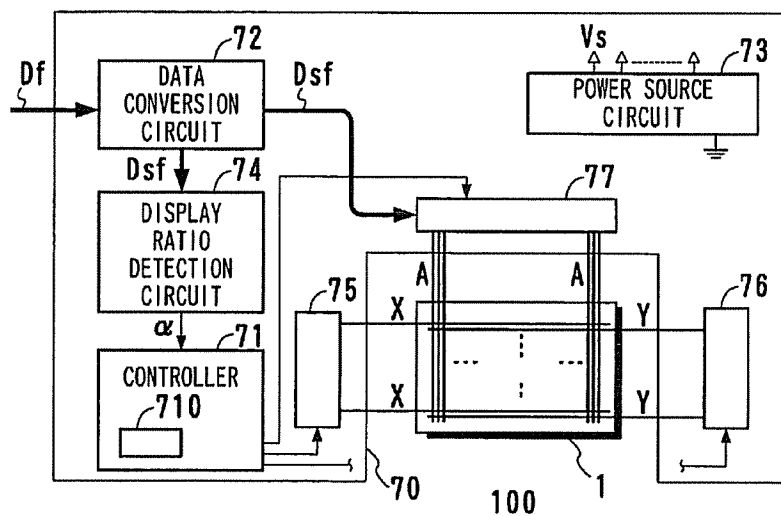
(74) *Attorney, Agent, or Firm*—Staas & Halsey LLP

(57)

**ABSTRACT**

A method for driving a plasma display panel is provided in which wasteful power consumption is reduced and light emission efficiency is improved when the number of cells to be lighted is relatively small. The method includes classifying a display ratio into plural group ranges, selecting a suitable display pulse waveform for each group range, detecting the display ratio of an object to be displayed in a real display, and plural types of display pulses having different waveforms are used differently in accordance with the result of the detection. The display ratio means a ratio of the number of cells to be lighted to the number of cells of the screen.

**11 Claims, 6 Drawing Sheets**



## PART B - FEE(S) TRANSMITTAL

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Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE  
 Commissioner for Patents  
 P.O. Box 1450  
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 WASHINGTON, DC 20005

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,535	03/24/2004	Naoki Itokawa	1466.1088	3781

TITLE OF INVENTION: METHOD FOR DRIVING PLASMA DISPLAY PANEL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$1440	<del>\$1440</del> \$ 70	02/17/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEWIS, DAVID LEE	2629	345-060000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

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1 STAAS & HALSEY LLP

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

HITACHI, LTD.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

TOKYO, JAPAN

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

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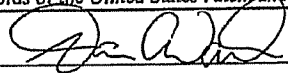
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5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

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Authorized Signature



Date

2-17-09

Typed or printed name

AARON C. WALKER

Registration No.

59,921

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1875.1020

10/807,535 METHOD FOR DRIVING PLASMA DISPLAY PANEL

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## Patent Assignment Abstract of Title

**Total Assignments: 3**

Application #: 10807535

Filing Dt: 03/24/2004

Patent #: 7570231

Issue Dt: 08/04/2009

PCT #: NONE

Publication #: US20040201553

Pub Dt: 10/14/2004

Inventors: Naoki Itokawa, Yoshiho Seo, Yasunobu Hashimoto, Tetsuya Sakamoto, Tomokatsu Kishi

Title: METHOD FOR DRIVING PLASMA DISPLAY PANEL

**Assignment: 1**

Reel/Frame: 015484 / 0986

Received: 06/24/2004

Recorded: 06/21/2004

Mailed: 12/27/2004

Pages: 4

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignors: ITOKAWA, NAOKI

Exec Dt: 03/13/2004

SEO, YOSHIHO

Exec Dt: 03/15/2004

HASHIMOTO, YASUNOBU

Exec Dt: 03/15/2004

SAKAMOTO, TETSUYA

Exec Dt: 03/19/2004

KISHI, TOMOKATSU

Exec Dt: 03/29/2004

Assignees: FUJITSU LIMITED

2 \*1-1, KAMIKODANAKA, 4-CHOME NAKAHARA-KU  
KAWASAKI-SHI, KANAGAWA 211-8588, JAPAN2 \*FUJITSU HITACHI PLASMA DISPLAY LIMITED  
2-1, SAKADO 3-CHOME TAKATSU-KU  
KAWASAKI-SHI  
KANAGAWA 213-0012, JAPAN

Correspondent: STAAS &amp; HALSEY LLP

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**Assignment: 2**

Reel/Frame: 017136 / 0874

Received: 12/23/2005

Recorded: 12/23/2005

Mailed: 02/09/2006

Pages: 3

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: FUJITSU LIMITED

Exec Dt: 10/18/2005

Assignee: HITACHI, LTD.

6-6, MARUNOUCHI 1-CHOME, CHIYODA-KU  
TOKYO, JAPAN

Correspondent: STAAS &amp; HALSEY LLP

ATTENTION: H. J. STAAS

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**Assignment: 3**

Reel/Frame: 021785 / 0276

Received: 11/04/2008

Recorded: 10/29/2008

Mailed: 11/06/2008

Pages: 3

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: HITACHI LTD.

Exec Dt: 09/01/2005

Assignee: HITACHI PLASMA PATENT LICENSING CO., LTD.

2-1, OTEMACHI 2-CHOME  
CHIYODA-KU, TOKYO, JAPAN

Correspondent: STAAS &amp; HALSEY LLP

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DECEMBER 23, 2004

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RECORDATION DATE: 06/21/2004

REEL/FRAME: 015484/0986  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

ITOKAWA, NAOKI

DOC DATE: 03/13/2004

ASSIGNOR:

SEO, YOSHIHO

DOC DATE: 03/15/2004

ASSIGNOR:

HASHIMOTO, YASUNOBU

DOC DATE: 03/15/2004

ASSIGNOR:

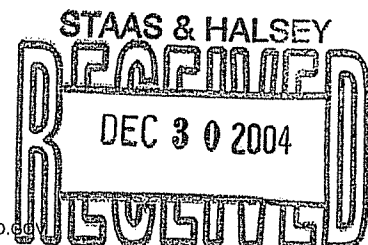
SAKAMOTO, TETSUYA

DOC DATE: 03/19/2004

ASSIGNOR:

KISHI, TOMOKATSU

DOC DATE: 03/29/2004



ASSIGNEE:

FUJITSU LIMITED

1-1, KAMIKODANAKA, 4-CHOME

NAKAHARA-KU

KAWASAKI-SHI, KANAGAWA 211-8588

JAPAN

ASSIGNEE:

FUJITSU HITACHI PLASMA DISPLAY

LIMITED

2-1, SAKADO 3-CHOME TAKATSU-KU

KAWASAKI-SHI

KANAGAWA 213-0012, JAPAN

SERIAL NUMBER: 10807535

FILING DATE: 03/24/2004

PATENT NUMBER:

ISSUE DATE:

TITLE: METHOD FOR DRIVING PLASMA DISPLAY PANEL

MAURICE CARTER, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



FORM PTO-1595

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102776401

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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
 Naoki ITOKAWA  
 Yoshiho SEO  
 Yasunobu HASHIMOTO  
 Tetsuya SAKAMOTO  
 Tomokatsu KISHI
 

6.21.04
  
2. Name and Address of receiving party(ies):  
  
 FUJITSU LIMITED  
 1-1, Kamikodanaka, 4-chome  
 Nakahara-ku, Kawasaki-shi  
 Kanagawa 211-8588  
 Japan  
  
 FUJITSU HITACHI PLASMA DISPLAY LIMITED  
 2-1, Sakado 3-chome Takatsu-ku,  
 Kawasaki-shi, Kanagawa 213-0012  
 JAPAN
  
3. Nature of conveyance:  

<input checked="" type="checkbox"/> Assignment	<input type="checkbox"/> Merger
<input type="checkbox"/> Security Agreement	<input type="checkbox"/> Change of Name
<input type="checkbox"/> Other: _____	

 Execution Date(s): March 13, 15, 15, 19, and 29, 2004
  
4. Application number(s) or patent number(s):  
☐ This document is being filed together with a new application:  
 (a) The execution date(s) of the application is/are:  
 (b) The title is:  

OR

☒ This document is being filed after filing of the application:  
 (a) Patent Application No(s). 10/807,535, filed March 24, 2004; or  
 (b) Patent No(s). , issued . \_\_\_\_\_
  
5. Name and address of party to whom correspondence concerning document should be mailed:  
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 Washington, D.C. 20005  

Our Docket: 1466.1088
  
6. Total number of applications and patents involved: 1
  
7. Total fee (37 CFR 3.41)..... (\$ 40.00 per Patent or Application in Assignment)  
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☐ Authorized to be charged to deposit account.

06/23/2004 HGETACHE 00000129 10807535

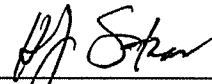
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8. Deposit Account No.: 19-3935 (Any underpayment is authorized to be charged to this Deposit Account)  
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H. J. Staas, Reg. No. 22,010  
Name of Person Signing

  
Signature

June 21, 2004  
Date

Total number of pages including cover sheet: 4

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FUJITSU LIMITED

FUJITSU HITACHI PLASMA DISPLAY LIMITED

# METHOD FOR DRIVING PLASMA DISPLAY PANEL

(Date)

(Typed Name & Signature of Witness(es))

Naoki ITOKAWA

Yoshiho SEO

Yasunobu HASHIMOTO

Tetsuya SAKAMOTO

Ikuyo KANAGAWA

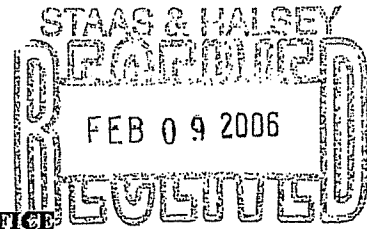
Ikuyo KANAGAWA

IKUJO KANAGAWA

Ikuyo KANAGAWA

5)	<u>Tomokatsu Kishi</u> Tomokatsu KISHII	<u>Mar. 29. 2004</u>	<u>Ikuyo Kanagawa</u> Ikuyo KANAGAWA
6)	_____	_____	_____
7)	_____	_____	_____
8)	_____	_____	_____
9)	_____	_____	_____
10)	_____	_____	_____
11)	_____	_____	_____
12)	_____	_____	_____

0023.109



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

FEBRUARY 09, 2006

PTAS

\*700233073A\*

STAAS &amp; HALSEY LLP

ATTENTION: H. J. STAAS

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WASHINGTON, D.C. 20005

\*700233073A\*

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RECORDATION DATE: 12/23/2005REEL/FRAME: 017136/0874  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

## ASSIGNOR:

FUJITSU LIMITED

DOC DATE: 10/18/2005

## ASSIGNEE:

HITACHI, LTD.6-6, MARUNOUCHI 1-CHOME, CHIYODA-  
KU

TOKYO, JAPAN

SERIAL NUMBER: 09760883

FILING DATE: 01/17/2001

PATENT NUMBER:

ISSUE DATE:

TITLE: DISPLAY APPARATUS WITH REDUCED NOISE EMISSION AND DRIVING METHOD  
FOR THE DISPLAY APPARATUS

017136/0874 PAGE 2

SERIAL NUMBER: 10102017

PATENT NUMBER:

TITLE: PLASMA DISPLAY APPARATUS

FILING DATE: 03/21/2002

ISSUE DATE:

SERIAL NUMBER: 10627727

PATENT NUMBER:

TITLE: GAS DISCHARGE PANEL SUBSTRATE ASSEMBLY, PRODUCTION METHOD THEREFOR  
AND AC TYPE GAS DISCHARGE PANEL

FILING DATE: 07/28/2003

ISSUE DATE:

SERIAL NUMBER: 10807535

PATENT NUMBER:

TITLE: METHOD FOR DRIVING PLASMA DISPLAY PANEL

FILING DATE: 03/24/2004

ISSUE DATE:

SERIAL NUMBER: 11071346

PATENT NUMBER:

TITLE: PLASMA DISPLAY APPARATUS

FILING DATE: 03/04/2005

ISSUE DATE:

SERIAL NUMBER: 09427936

PATENT NUMBER: 6496194

TITLE: HALFTONE DISPLAY METHOD AND DISPLAY APPARATUS FOR REDUCING HALFTONE  
DISTURBANCES OCCURRING IN MOVING IMAGE PORTIONS

FILING DATE: 10/27/1999

ISSUE DATE: 12/17/2002

SERIAL NUMBER: 09608150

PATENT NUMBER: 6496166

TITLE: DISPLAY APPARATUS

FILING DATE: 06/30/2000

ISSUE DATE: 12/17/2002

SERIAL NUMBER: 09970706

PATENT NUMBER: 6538382

TITLE: PLASMA DISPLAY APPARATUS HAVING REINFORCED ELECTRONIC CIRCUIT MODULE

FILING DATE: 10/05/2001

ISSUE DATE: 03/25/2003

SERIAL NUMBER: 10680136

PATENT NUMBER: 6855026

TITLE: METHOD FOR FORMING PARTITIONS OF PLASMA DISPLAY PANEL BY USING  
SANDBLASTING PROCESS

FILING DATE: 10/08/2003

ISSUE DATE: 02/15/2005

SERIAL NUMBER: 10320550

PATENT NUMBER: 6781564

TITLE: DISPLAY APPARATUS

FILING DATE: 12/17/2002

ISSUE DATE: 08/24/2004

SERIAL NUMBER: 08693598

PATENT NUMBER: 5907316

TITLE: METHOD OF AND APPARATUS FOR DISPLAYING HALFTONE IMAGES

FILING DATE: 08/05/1996

ISSUE DATE: 05/25/1999

SERIAL NUMBER: 08883233

PATENT NUMBER: 6529204

TITLE: METHOD OF AND APPARATUS FOR DISPLAYING HALFTONE IMAGES

FILING DATE: 06/26/1997

ISSUE DATE: 03/04/2003

JOANN STEWART, EXAMINER

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Date: 12/23/15

## Annex

Country	Application No.	Patent No.
US	09/427936	6496194
US	09/608150	6496166
US	09/760883	
US	09/970706	6538382
US	10/102017	
US	10/627727	
US	10/680136	6855026
US	10/807535	
US	10/866302	6781564
US	11/071346	
US	693598	5907316
US	883233	6529204



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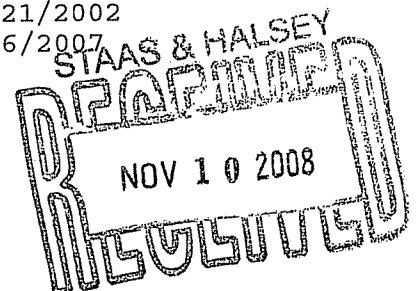
ASSIGNEE:  
HITACHI PLASMA PATENT LICENSING  
CO., LTD.  
2-1, OTEMACHI 2-CHOME  
CHIYODA-KU, TOKYO, JAPAN

SERIAL NUMBER: 09760883  
PATENT NUMBER: 7193596  
TITLE: DISPLAY APPARATUS WITH REDUCED NOISE EMISSION AND DRIVING METHOD FOR THE DISPLAY APPARATUS

FILING DATE: 01/17/2001  
ISSUE DATE: 03/20/2007

SERIAL NUMBER: 10102017  
PATENT NUMBER: 7164394  
TITLE: PLASMA DISPLAY APPARATUS

FILING DATE: 03/21/2002  
ISSUE DATE: 01/16/2007



*HSS*  
1876-1007  
SERIAL NUMBER: 10627727 FILING DATE: 07/28/2003  
PATENT NUMBER: 7372206 ISSUE DATE: 05/13/2008  
TITLE: GAS DISCHARGE PANEL SUBSTRATE ASSEMBLY HAVING PROTECTIVE LAYER IN CONTACT WITH DISCHARGE SPACE, AND AC TYPE GAS DISCHARGE PANEL HAVING THE ASSEMBLY

*ACW*  
1875-1020  
SERIAL NUMBER: 10807535 FILING DATE: 03/24/2004  
PATENT NUMBER: ISSUE DATE:  
TITLE: METHOD FOR DRIVING PLASMA DISPLAY PANEL

SERIAL NUMBER: 10866302 FILING DATE: 06/14/2004  
PATENT NUMBER: 7002535 ISSUE DATE: 02/21/2006  
TITLE: DISPLAY APPARATUS

*1872-1008*  
*PWB/HSS*  
SERIAL NUMBER: 11071346 FILING DATE: 03/04/2005  
PATENT NUMBER: ISSUE DATE:  
TITLE: PLASMA DISPLAY APPARATUS

*023-1072/HSS*  
SERIAL NUMBER: 08693598 FILING DATE: 08/05/1996  
PATENT NUMBER: 5907316 ISSUE DATE: 05/25/1999  
TITLE: METHOD OF AND APPARATUS FOR DISPLAYING HALFTONE IMAGES

SERIAL NUMBER: 09608150 FILING DATE: 06/30/2000  
PATENT NUMBER: 6496166 ISSUE DATE: 12/17/2002  
TITLE: DISPLAY APPARATUS

*023-1083/HSS*  
SERIAL NUMBER: 09427936 FILING DATE: 10/27/1999  
PATENT NUMBER: 6496194 ISSUE DATE: 12/17/2002  
TITLE: HALFTONE DISPLAY METHOD AND DISPLAY APPARATUS FOR REDUCING HALFTONE DISTURBANCES OCCURRING IN MOVING IMAGE PORTIONS

*023-1075/HSS*  
SERIAL NUMBER: 08883233 FILING DATE: 06/26/1997  
PATENT NUMBER: 6529204 ISSUE DATE: 03/04/2003  
TITLE: METHOD OF AND APPARATUS FOR DISPLAYING HALFTONE IMAGES

SERIAL NUMBER: 10320550 FILING DATE: 12/17/2002  
PATENT NUMBER: 6781564 ISSUE DATE: 08/24/2004  
TITLE: DISPLAY APPARATUS

*1466-1078/HSS*  
SERIAL NUMBER: 10680136 FILING DATE: 10/08/2003  
PATENT NUMBER: 6855026 ISSUE DATE: 02/15/2005  
TITLE: METHOD FOR FORMING PARTITIONS OF PLASMA DISPLAY PANEL BY USING SANDBLASTING PROCESS

ALLYSON PURNELL, EXAMINER  
ASSIGNMENT SERVICES BRANCH  
PUBLIC RECORDS DIVISION

11-04-2008



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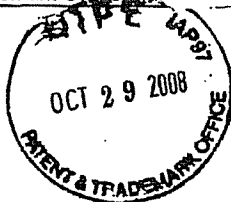
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OR  
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Our Docket: 1920.0002

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Annex

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693598	5907316
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